

IN THE SPECIFICATION

Please **delete** the Sequence Listing presently of record and substitute, therefor, the attached Substitute Sequence Listing.

Please **amend** the paragraph beginning at page 12, line 7 and ending at page 12, line 14 with the following rewritten paragraph:

C²
--Kozaki et al. (in "Antibodies against Botulism Neurotoxin", L.L. Simpson, ed., 1989, Academic Press, New York) suggested that a protective epitope might be present in the 50 kDa carboxyl terminus (HC) region of the protein. Thompson et al. (1990, *Eur. J. Biochem.* **189**:73-81) deduced the amino acid sequence for the serotype A botulinum toxin. DasGupta et al. (1990, *Biochemie*, **72**:661-664) identified the "nick" site for post-translational cleavage of the expressed toxin polypeptide, from which the sequence of the heavy chain can be deduced as SEQ ID NO:41. See also Krieglstein, et al., 1994, *J. Protein Chem.*, **13**:49-57.--

Please **delete** the sequence paragraph beginning at page 12, line 15 and ending at page 12, line 31.

Please **amend** the paragraph beginning at page 13, line 1 and ending at page 13, line 6 with the following rewritten paragraph:

C³ --Whelan et al. (*Appl. Environ. Microbiol.* **58**:2345-2354, 1992) have deduced the amino acid sequence for the serotype B botulinum toxin. Schmidt, et al. (1985, *Arch. Biochem. Biophys.*, **238**:544-548) provided N-terminal sequence information for the heavy chain resulting from post-translational cleavage of the expressed toxin polypeptide, and the sequence of the heavy chain can be deduced from this information as SEQ ID NO:42.--

Please **delete** the sequence paragraph beginning at page 13, line 8 and ending at page 13, line 24.

Please **amend** the paragraph beginning at page 36, line 17 and ending at page 36, line 17 with the following rewritten paragraph:

C⁴ --The sequence of the C fragment of the A chain was deduced as SEQ ID NO:38.--

Please **delete** the sequence paragraph beginning at page 36, line 18 and ending at page 36, line 26.

Please **amend** the paragraph beginning at page 36, line 32 and ending at page 36, line 32 with the following rewritten paragraph:

C⁵ --The sequence for the synthetic gene is SEQ ID NO:37.--

Please **delete** the sequence paragraph beginning at page 37, line 1 and ending at page 37, line 27.

Please **amend** the paragraph beginning at page 38, line 6 and ending at page 38, line 7 with the following rewritten paragraph:

C⁶ --The C fragment for botulism toxin serotype B of Whelan was studied and the portion of the protein having the sequence of SEQ ID NO:40 was defined as the C fragment.--

Please **delete** the sequence paragraph beginning at page 38, line 8 and ending at page 38, line 16.

Please **delete** the paragraph beginning at page 38, line 17 and ending at page 38, line 17.

Please **amend** the paragraph beginning at page 38, line 18 and ending at page 38, line 25 with the following rewritten paragraph:

C⁷ --The synthetic gene for expression in *E. coli* was produced in the manner described for synthesis of the gene for the C fragment of the A strand, namely, using a large number of oligomers of approximately 60-65 bases corresponding to the sequences of the + and - strands with overlaps of 7 bases. The oligomers were allowed to anneal and were ligated to form subunits of 250-300 base pairs each. Each subunit had been designed to have restriction

sites at their termini which allowed them to be assembled in the right order to form the complete gene. The synthetic gene encoding the C fragment of the B toxin is SEQ ID NO:39.--

Please **delete** the sequence paragraph beginning at page 38, line 26 and ending at page 39, line 21.